

Nordenstamia LUNDIN (Compositae-Senecioneae), a new genus from the Andes of South America

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Abstract

The new genus *Nordenstamia* LUNDIN (Compositae-Senecioneae) is described. The type is *Gynoxys repanda* WEDD. dating from 1856, which was transferred to *Aequatorium* B. NORD. by C. JEFFREY in 1992. The new genus consists of about 20 species distributed along the Andes from northern Argentina and Bolivia to northern Peru and southern Ecuador. Many of the species belonging to *Nordenstamia* are currently misplaced in *Aequatorium*, *Gynoxys* and *Senecio*.

Introduction

When NORDENSTAM in 1978 described the genus *Aequatorium* he restricted the genus to comprise white-flowered, alternate-leaved shrubs and trees with a distinct tomentum of peltate-stellate trichomes in two layers especially on the abaxial leaf-sides. He discussed the yellow-flowered members of *Senecio* sect. *Praegynoxys* CUATREC. as related, but not congeneric.

Later authors such as JEFFREY (1992) and ROBINSON & CUATRECASAS (1992) amended the generic concept of *Aequatorium* by including the members of sect. *Praegynoxys* as well as adding new yellow-flowered species from Bolivia and Peru. NORDENSTAM reluctantly followed suit and provisionally recognized *Praegynoxys* as a subgenus under *Aequatorium* (NORDENSTAM 1997).

During my studies of *Gynoxys* and in discussions with Dr. NORDENSTAM it has become increasingly clear that the *Praegynoxys* group is generically distinct from *Gynoxys* as well as from *Aequatorium*. This is also corroborated by ongoing molecular studies by the Senecioneae phylogeny group (PELSER et al., unpublished; NORDENSTAM, pers. comm.). I here propose the new generic name *Nordenstamia* for this distinctive taxon of Andean shrubs and trees.

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The new genus *Nordenstamia* LUNDIN thus comprises the taxa first recognized as section *Praegynoxys* within *Senecio* s. lat. by CUATRECASAS (1951) and later as a section of *Gynoxys* (CUATRECASAS 1955), and finally as a subgenus of *Aequatorium* (NORDENSTAM 1997). Since the genus *Aequatorium* was described in 1978 by NORDENSTAM, several transfers to *Aequatorium* have been made and a number of new species have been described (e.g., JEFFREY 1992, DÍAZ-PIEDRAHIITA & CUATRECASAS 1990, 1994, ROBINSON & CUATRECASAS 1992, NORDENSTAM 1997). Some of these, notably those from Colombia and Ecuador will remain in *Aequatorium*, whereas several others from Peru and Bolivia actually belong in *Nordenstamia*.

Aequatorium with white rays, obtuse style branches of disc-florets, and a characteristic stellate tomentum is a distinct genus of about ten species restricted to Ecuador and Colombia, whereas *Nordenstamia* with yellow rays, pointed style branch tips, and substellate or variously branching trichomes comprises about 20 species confined to Peru, Bolivia and northern Argentina. The generic name is proposed in honour of my long-term mentor, colleague and friend BERTIL NORDENSTAM, who is a world authority on the Senecioneae and who introduced me to this exciting and variable group of plants during our common field trips in Latin America.

Material and methods

Herbarium material has been studied from the herbaria: GB, MO, NY, P, S, U, US, and additional specimens from some other herbaria.

Taxonomy and discussion

Nordenstamia LUNDIN, gen. nov. (Compositae-Senecioneae)

Type: *N. repanda* (WEDD.) LUNDIN.

Frutices vel arbores, partibus vegetativis saltem in foliorum paginis inferioribus pubescentibus; trichomata ramosa-furcata-substellata. Folia alterna lanceolata-elliptica-ovata integra coriacea petiolata vel raro sessilia, margine repanda vel sinuato-dentata vel denticulata, supra glabrescentia, subtus plus minusve tomentosa. Capitula heterogama radiata plura vel numerosa in synflorescentiam terminalem pyramidalem vel umbelliformem disposita. Involucrum cylindraceo-cyathiforme calyculatum; bracteis subuniseriatis oblongo-lanceolatis. Flosculi radii feminei flavi vel lutei. Flosculi disci hermaphroditi; corolla flava quinquelobata. Antherae basi ecaudatae sagittatae; cellulae endothecii parietibus horizontalibus solum noduliferis; collum filamenti cylindraceum. Styli rami apice acuti pilis brevibus et penicillo centrali abbreviato ornato. Cypselae homomorphae costatae glabrae. Pappi setae numerosae barbellatae persistentes.

Erect branching shrubs or trees 2–18 m tall, finely tomentose-pubescent at least on young vegetative parts and leaf undersides. *Leaves* alternate or rarely opposite, petiolate or rarely sessile, lanceolate to narrowly ovate or ovate-cordate, entire, midribbed and pinnately veined, coriaceous; margins shallowly sinuate-dentate or repand or denticulate, apex acute or mucronate, base truncate or somewhat cordate; upper side glabrescent; lower side greyish-white-tomentose with substellate or branching, sometimes globose-glochidiate trichomes. *Capitula* heterogamous, radiate, several to numerous in terminal umbelliform or subpyramidal synflorescences. *Receptacle* flat or somewhat convex, indistinctly alveolate. *Involucre* subcylindrical – cupshaped with few, short calyculus bracts; involucre bracts 5–10, subuniseriate, oblong or elliptic-oblong, coriaceous, glabrous or finely tomentose. *Ray-florets* 3–5, female; ligule yellow; style bilobed, fertile. *Disc-florets* 5–15, hermaphrodite; corolla yellow, 5-lobed with narrowly triangular-ovate lobes. Anthers basally sagittate, ecaudate; apical appendage oblong-ovate; endothecial tissue polarized; filament collar cylindrical, not basally thickened. Style branches linear-oblong, apically acute—conical with a short central pencil of hairs; outside distally papillate. *Cypselas* homomorphic, oblong, glabrous, costate. *Pappus* bristles numerous, persistent, white, barbellate.

Type: *Nordenstamia repanda* (WEDD.) LUNDIN, **comb. nov.**

Basionym: *Gynoxys repanda* WEDD., Chlor. Andina 1: 77 (1856). Syn.: *Aequatorium repandum* (WEDD.) C. JEFFREY, Kew Bull. 47(1): 62, in corrigendo (1992). - Type: Bolivia, Prov. de Larecaja, vallée de Tipuani, 1851, WEDDELL s.n. (P! holo., iso.!) - Fig. 1.

The new genus comprises about 20 species distributed from northern Argentina through Bolivia to northern Peru and southern Ecuador. The type species *N. repanda* is restricted to central Bolivia and southern Peru. A review of the known species will be published in a forthcoming paper by B. NORDENSTAM.

References

- CUATRECASAS, J. 1951. Studies on Andean Compositae – II. *Fieldiana Bot.* 27(2): 1–74.
- CUATRECASAS, J. 1955. A new genus and other novelties in Compositae. *Brittonia* 8: 151–163.
- DÍAZ-PIEDRAHÍTA, S. & J. CUATRECASAS 1990. El género *Aequatorium* NORD. (Senecioneae-Asteraceae) en Colombia. *Rev. Acad. Colomb. Cienc.* 17(67): 659–666.
- DÍAZ-PIEDRAHÍTA, S. & J. CUATRECASAS 1994. Novedades colombianas en el género *Aequatorium* NORD. (Asteraceae, Senecioneae). *Rev. Acad. Colomb. Cienc.* 19(73): 247–252.
- JEFFREY, C. 1992. The tribe Senecioneae (Compositae) in the Mascarene Islands with an annotated check-list of the genera of the tribe. *Kew Bull.* 47: 49–109.
- NORDENSTAM, B. 1978. Taxonomic studies in the tribe Senecioneae (Compositae). *Opera Bot.* 44: 1–83.
- NORDENSTAM, B. 1997. The genus *Aequatorium* B. NORD. (Compositae-Senecioneae) in Ecuador. *Comp. Newsl.* 31: 1–16.
- ROBINSON, H. & J. CUATRECASAS 1992. Additions to *Aequatorium* and *Gynoxys* (Asteraceae: Senecioneae) in Bolivia, Ecuador and Peru. *Novon* 2: 411–416.

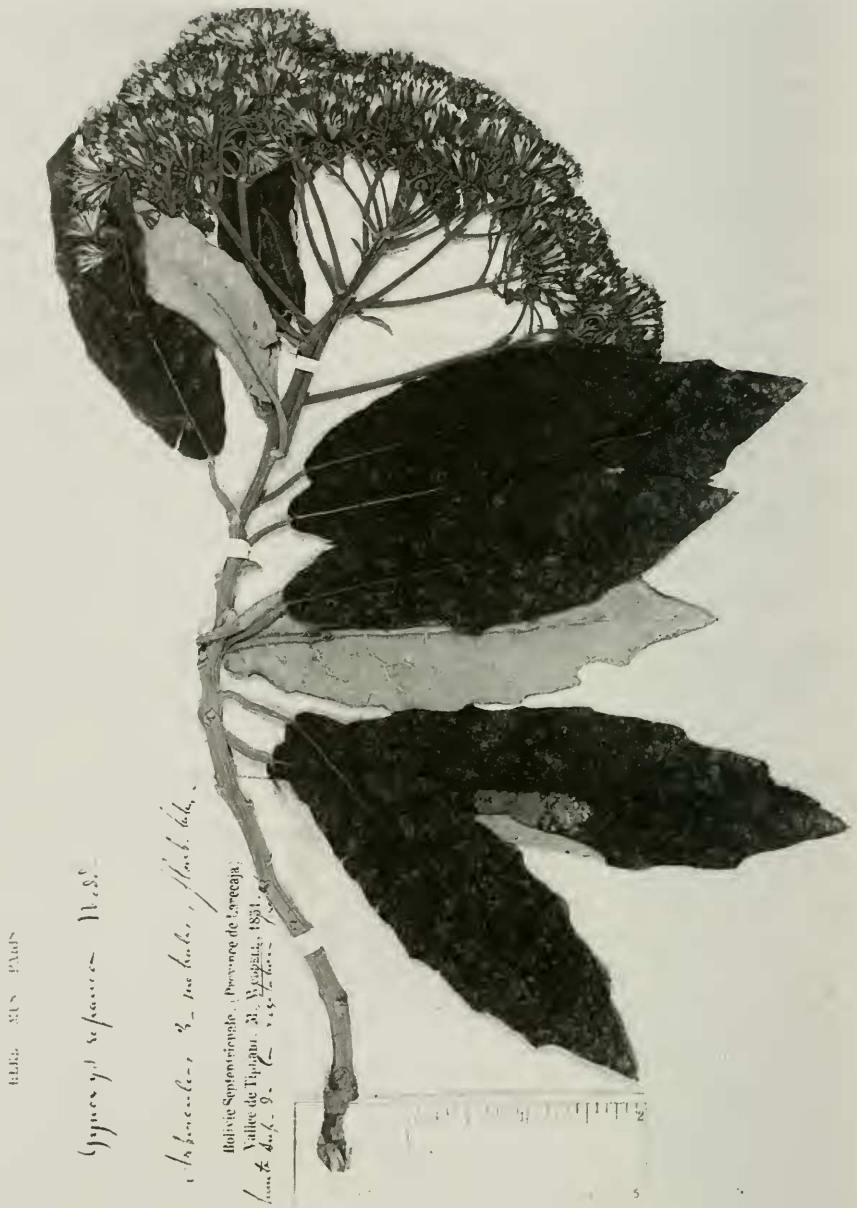


Fig. 1. *Gynoxys repanda* WEDD., type of the new genus *Nordenstamia* LUNDIN.
WEDDELL s. n., Bolivia, Prov. de Larecaja, vallée de Tipuani, 1851 (Phototype).